

Richmond Bridge
US 90A at the Brazos River
Richmond
Fort Bend County
Texas

HAER No. TX-11

HAER
TEX
79-RICH,
2-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD
Rocky Mountain Regional Office
National Park Service
P.O. Box 25287
Denver, Colorado 80225-0287

HISTORIC AMERICAN ENGINEERING RECORD
RICHMOND BRIDGE
HAER No. TX-11

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I. INTRODUCTION

Location: U.S. Highway 90A at the Brazos River
Richmond, Fort Bend County, Texas

Quad: Richmond, Texas (2995-321)

UTM: Zone: 15
Easting: 232890
Northing: 3275515

Date of Construction: 1924-25 (modified 1933)

Present Owner: Texas Department of Transportation
125 East 11th Street
Austin, Texas

Present Use: Vehicular and pedestrian bridge demolished July 1988.

Significance: The Richmond Bridge was an important element in the first Federally-assisted highway connecting Houston, and San Antonio, two of Texas' major metropolitan areas. Its construction marked the first use by the Texas Highway Department of a cantilever truss structure and of pneumatic pier excavation.

Historian: Ralph E. Newlan, Volz and Associates, March 1989.

II. NARRATIVE REPORT

The bridge constructed in 1925 over the Brazos River on US Highway 90A was a significant accomplishment for many reasons. A steel cantilevered through truss structure, the bridge was 1,156 feet long with a 20 foot wide concrete paved roadbed. The 364 foot span between the two piers across the main channel had 132-foot cantilevered arms projecting on each side and 80-foot attached truss sections. Each 80-foot span was supported on the outside end by concrete piling piers. The 465-foot eastern approach to the bridge consisted of 14 concrete girder spans on concrete piling piers. The most unique aspect of the bridge was that it was the first highway bridge in the State of Texas to use the pneumatic method of pier construction. At the time of construction, the piers, which were 119 feet bottom to top and extended 30 feet below sea level, were the highest masonry piers constructed in Texas. The Richmond bridge was also an important link in the state and national highway systems. State Highway No. 3 (now US 90A) was not only the main artery between Houston and San Antonio, but also part of the "Old Spanish Trail" and the Southern National Highway between the Everglades and the West Coast. The State Highway Department predicted in 1924 that when the bridge was completed the highway would develop into one of the heaviest traveled roads in the South.¹

Any narrative dealing with a bridge must mention the river itself. The Brazos River is the longest river in Texas. From its headwaters in New Mexico, it travels 840 miles before emptying into the Gulf of Mexico.² Prior to flood control, the Brazos was an eccentric river. While normally winding slowly to the Gulf, it was capable of great destruction to crops and buildings during floods.³

The Brazos River was a magnet to early settlers because of the rich soils deposited there. In November, 1821 the first Anglo settler to enter Austin's Colony proper began operating a ferry a short distance to the north at the site that became Washington-on-the-Brazos.⁴ As the river journeys toward the Gulf of Mexico, it flows around a massive deposit of sand, forming a distinctive bend that is only two miles across at its neck. During the Texas Colonial Period this bend was referred to as the

"Fort Settlement" because of a small log shanty or "fort" that immigrants built there early in 1822. From all historical accounts, including a granite marker erected in 1936, the "fort" was located on the west bank of the Brazos River, just north of where the 1925 bridge was to be located. Settlers began arriving at the bend, and by 1824 when the first titles were issued, several had built cabins and started gardens.⁵ In May 1837, when the Congress of the Republic of Texas passed a bill incorporating 19 towns in the state; Richmond was one of them.⁶ By the summer of 1837 a storehouse and adjoining residence were completed on the riverbank and Morton Street was the main street of the new town. Richmond and the bend became a part of Fort Bend County when it was created in December, 1837.⁷

Boats and rafts were the only dependable market transportation for the residents of the county. Produce and cattle were loaded on steamboats at the mouth of the Brazos River bound for New Orleans. Planters in the area had also been hauling cotton and hides to Houston by wagon, but in the wet season that was impossible.⁸ A terry was used to transport people and wagons across the river. The need for more dependable transport of goods made the arrival of the railroads a very important event. In December, of 1855 the Buffalo Bayou, Brazos and Colorado Railway tracks reached the east bank of the Brazos opposite the town of Richmond. The Brazos had to be crossed and the construction of a suitable bridge would have been prohibitive in both time delays and money. A temporary bridge, six feet above the water line, was devised that provided for a large flatboat, moored under the center span, to move it out of the way allowing for river traffic to pass. Often the temporary bridge was out of service and the public ferry was used.⁹ The ferry continued in operation until 1887 when a collapsed bridge from Waller County was moved to Richmond by wagon and erected.¹⁰ That bridge lasted until August 3, 1893 when a herd of cattle driven across caused the middle span to collapse.¹¹ A year later, 1894, a magnificent new Brazos River bridge with a 420-foot main body and wooden trestle approaches was opened. The new bridge terminated on the west bank of the river at Commerce Street.¹² In December, 1913 a flood took away about 80-feet of the west approach and approximately 70 feet of the east approach, leaving the main bridge span between the piers isolated.

*County officials contracted with the Austin Brothers of Dallas, Texas (later the Austin Bridge Company)

to repair the bridge by January 10, 1914.¹³ The Austin Brothers completed their contract by utilizing the existing piers and once again traffic moved over the bridge into and out of Richmond.¹⁴

In the Spring of 1922, flooding caused the collapse of the center span of the Brazos River bridge, leaving only the 1913-1914 approaches erected by the Austin Brothers.¹⁵ Once again the only means of crossing the Brazos at Richmond was by ferry. On May 11, 1922 the county ordered that a ferry be built and later that month hired a ferryman to operate it.¹⁶ Efforts to build a new bridge got underway within a few months. A financial statement issued by Fort Bend County in September, 1924 showed that bonds in the amount of \$100,000 were issued in December, 1922 for the purpose of constructing a new bridge over the Brazos River.¹⁷ In the Spring of 1923 the county ordered that bids be placed for the project. The plans for the new bridge were prepared under the supervision of the State Highway Department.¹⁸ Dates on a set of plans at the Fort Bend County Museum indicate that the drawings were completed between July and October of 1923.

The need for a new bridge became more apparent with each passing day. In August, 1923 a new ferry was required and repairs were made to the old ferry.¹⁹ Plans were also made to construct a concrete highway from the Harris County line, west to the Brazos River, paralleling the Galveston, Harrisburg and San Antonio Railway.²⁰

Facing economic hardship due to the lack of a bridge for the timely exchange of goods and services, residents of the county were becoming more vocal. An additional \$40,000 was required to supplement the \$100,000 bond issue to insure the construction of a new bridge. To speed the construction, several prominent merchants and bankers offered interest free loans to cover the outstanding balance.²¹ The county advertised for bids in several papers in November, 1923. Bids were to be received by December 14, 1923 in the office of C. D. Myers, County Judge, Fort Bend County. There were two proposed sites for the bridge. The Morton Street location was the one preferred by most residents with the Liberty Street location as an alternate.²²

The Commissioners Court opened the bids for the bridge on December 14, 1923. The lowest bid was by J. DePuy of San Antonio and also considered was the bid by the Austin Bridge Company of

Dallas. State and Federal officials considered the DePuy bid too low and the Austin Bridge Company's bid slightly high. Since no State funds had yet been appropriated and the federal funding was insufficient, the bids were returned.²³ The county advertised for bids again in The Texas Coaster and the Houston Chronicle. The bids were due by February 15, 1924.²⁴

On February 15, 1924 several of the bidding firms were present at the meeting of the Commissioners Court. The most acceptable bids were those of the Austin Bridge Company of Dallas for the piers and the structure, and the Missouri Valley Bridge & Iron Company of Leavenworth, Kansas for the piers alone. The Austin Bridge Company proposed that open pile-driven cofferdam piers be used at a cost of \$104,534.80. Missouri Valley proposed that pneumatic caisson piers with an additional 8 feet in depth be used and at a cost of \$104,000.30. In an interview with Judge C. D. Myers, The Texas Coaster reported that the contract would probably be split, with the Missouri Valley Company constructing the piers and the Austin Bridge Company building the bridge proper.²⁵ In early April soundings were made in the river to ascertain the type of piers to be used.²⁶

"Work To Begin On Bridge Across Brazos" was the headline of The Texas Coaster on May 2, 1924. County Judge Myers, County Commissioner Wirtz, and County Engineer Charles H. Kendall went to Dallas to confer with State and Federal Highway officials on the signing of the contract, and Judge Myers sent a telegram notifying the people of Richmond that a bridge across the Brazos at Liberty Street would start in less than 30 days. Contracts were awarded to the Austin Bridge Company and Missouri Valley Bridge & Iron Company.²⁷ The May 2nd article continued by stating, "The building of the bridge, together with the completion of the concrete highway to the Harris County line, will throw the travel of thousands of motorist through Richmond, which is on the direct highway between Houston and San Antonio."²⁸

Agreements and contracts between the county and the contractors were signed and passed by the Commissioners Court between April 30, 1924 and May 5, 1924.²⁹ The Austin Bridge Company subcontracted to the Virginia Bridge & Iron Company of Roanoke, Virginia for the structural steel.³⁰

County Judge C. D. (Clem) Myers was one of those instrumental in the development and

continued progress of the Brazos River bridge at Richmond. He was born in 1879 to August E. and Florence Dyers Myers. His father moved to Richmond after the Civil War and opened a mercantile business.³¹ Over a 30 year period C. D. Myers served as County Clerk, County Judge, County Auditor, and Justice of the Peace.³² The 1925 Brazos River bridge was in the design and construction phase during his tenure as County Judge. As County Judge he served in a supervisory role in the funding, negotiating, and contracting for the bridge. Myers left that office in 1925 and continued to serve the people of Fort Bend County for many years. He died October 20, 1966 and is buried in Morton Cemetery in Richmond.³³

The planning and construction phase of the Richmond bridge was under the supervision of Charles Hanford Kendall, Fort Bend County Engineer. He served in that capacity from July, 1922 until May, 1927. Kendall was a man of unusually high qualifications for the position of county engineer. Born in Rushford, New York on May 27, 1872 he attended Rushford schools until his graduation in 1891. Charles Kendall then attended Cornell University, receiving his degree in civil engineering in 1895. He later attended the University of Minnesota where he also taught surveying and drafting. He received his Master of Science degree in 1896 and continued to teach through the spring semester of 1897. Kendall practiced his profession around the world, including railroad work in Ecuador and railroad and public works projects in the Philippines. He returned to the U.S. in 1909 and practiced in western New York State. In 1918, Charles Kendall moved to Texas to work for the State Highway Department, remaining until he became Fort Bend County Engineer in 1922. After leaving that position he returned to the State Highway Department and served in various capacities until September, 1937. He applied for registration as an engineer and received Texas Registration No. 1637 in 1938. Charles H. Kendall died in 1941.³⁴

The Austin Bridge Company was initially formed in the late 19th century and by 1902, with George and Frank Austin in charge, was known as the Austin Brothers, Contractors. Originally the firm sold road machinery and contracted to erect bridges fabricated by other concerns, but by 1910 they were fabricating their own steel. In 1918 the contracting/construction and fabricating divisions became

separate companies with Charles Moore as head of the Austin Bridge Company. The company continued to expand and was the major contractor for numerous bridges in the state.³⁵

The Missouri Valley Bridge & Iron Company of Leavenworth, Kansas impressed the Fort Bend County officials with a new method of constructing piers. This new type of pier construction appeared to eliminate many of the problems Brazos River bridges had suffered previously. The parent company, The Missouri Bridge Company, was formed in 1874 and in 1904 became the Missouri Valley Bridge & Iron Company. They primarily built railroad bridges but after 1921 began to concentrate their focus on deep and subaqueous foundations.³⁶ The firm was responsible for many bridges in Texas and had earlier fulfilled contracts with Fort Bend County.³⁷

The Virginia Bridge & Iron Company of Roanoke, Virginia was founded in 1895 as an outgrowth of a small foundry and shop previously operating under the name of the American Bridge Company. At its inception the firm chiefly manufactured light highway bridges and structural steel.³⁸ Virginia Bridge & Iron supplied work to many southern states including Louisiana, Kentucky, Tennessee, and Texas.³⁹ From existing archival records, the firm apparently worked with the Austin Bridge Company on similar projects such as the bridge across the Arroyo Colorado in Cameron County, Texas.⁴⁰

The Austin Bridge Company sent plans to the Virginia Bridge & Iron Company in February, 1924. Stamps on the reverse side of the sheets show that these went to The Virginia Bridge & Iron Company's Engineering Department on February 4, 1924 and finally to the Drafting Department on May 21, 1924.⁴¹

Missouri Valley Bridge & Iron Company began work on the piers on June 21, 1924. The plans called for two piers to be erected. Pier #1 (West Pier) was the first to be erected and Pier #2 (East Pier) was torme next. Missouri Valley completed their work on November 26, 1924.⁴²

In the winter of 1924 work was underway on the concrete piles and trestles for the approaches to the bridge. The Texas Coaster reported on January 9, 1925 that workers were due the next week to begin putting steel across the piers for the Richmond bridge. The article continued by stating that the workmen had been busy on the eastern approach for some time and that the pile-driver was

hammering down concrete piles every day.

The erection of the steel was underway. The 29 sheet set of plans for the bridge contained a sequence of construction for the steel erection on sheet no. 20 as follows:

ERECTION NOTE:

Design based on erection by "Cantilever Method" as follows:

1. Erect East cantilever arm on falsework;
2. Erect 6 panels west from pier no. 2 as cantilever
3. Place falsework bent under 6th panel
4. Erect West cantilever arm on falsework
5. Erect 6 panels east from pier no. 2 as cantilever
6. Place falsework bent under 6th panel east of pier no. 1

and connect span at middle panel.⁴³

Photographs in the collection of the Fort Bend County Museum illustrate that the "Erection Notes" were followed. The eastern cantilever panels were entirely in place before work began on the western cantilever panels.

On May 14, 1925 the last piece of steel on the cantilever arms, over the main channel, and the overhead trusses, was put in place by the Virginia Bridge & Iron Company. Only the riveting of the steel and the placing of the concrete floor were left to be accomplished.⁴⁴ The local paper also noted that within 60 days a contract would be let for the construction of 15 miles of concrete highway from the bridge, eastward, to the Harris County line.⁴⁵

Plans were begun in earnest to organize a large celebration for the opening of the new bridge.⁴⁶ The residents of Richmond had been without a bridge for over three years. The new bridge, costing almost \$300,000, was well worth a party of great magnitude. The Texas Coaster, on June 26, 1925 reported the plans for the celebration, set to occur in late July, when the bridge was to be thrown open to traffic. The bridge was received by the authorities and opened at 6 a.m. on Thursday, July

23, 1925.⁴⁷

Houston Lighting and Power Company lit the bridge and barbecue grounds for the celebration that included band concerts, a cavalry tournament, airplane maneuvers, a baseball game, and a barbecue dinner. The Honorable Clarence R. Wharton delivered the afternoon address and the celebrants were treated to an evening of music by Fatty Martin's Orchestra.⁴⁸

Of all the workmen that labored on the bridge perhaps the most memorable was one who stayed and played a role in the future growth of Richmond. Bert Ansel came to Richmond with the Austin Bridge Company as timekeeper and apparently made many friends in the town. He was born in Hutchinson, Kansas in 1902 and worked in Kansas for the Austin Bridge Company.⁴⁹ After completing the Richmond project he worked on the bridge at LaGrange, remaining close to the friends he had made in Richmond. The Texas Coaster of December 4, 1925 reported an act of heroism performed by Bert Ansel while working in LaGrange. One of his fellow workers fell some 69 feet into the river and Ansel jumped in after the man. Although the jump into the river sprained both of his ankles, Ansel pulled the man to shore where it was found that his spine was broken in two places. The paper went on to laud Ansel for his actions and supported the recommendation that he should be awarded the Carnegie Medal for his act of heroism. In 1926 he married a girl from Richmond, Martha Virginia Hinson.⁵⁰ In October, 1933 Bert Ansel purchased the Brazos Motor Company.⁵¹ He later owned and operated the Western Auto Store (1938-1965) while engaged in rice farming and cattle raising. Ansel served as the Mayor of Richmond from 1944 to 1950. He retired in 1970 and passed away in 1981.⁵²

By the 1930's the automobile was a regular mode of transportation. Pedestrians found themselves displaced to the side of the highway. To alleviate that condition, efforts were underway in 1933 to widen and pave streets in Richmond and construct a pedestrian walkway appended to the north side of the bridge.⁵³ Bid notices went out in December, 1933 and the work on the bridge walkway was completed by the spring of 1934.⁵⁴

In time, the solitary bridge was unable to handle the increased traffic flow in and out of Richmond.

In 1965, another bridge was built just to the north, paralleling the 1925 structure which became the east bound half of a one-way pair.⁵⁵

In November, 1986, during the execution of a contract for cleaning and painting the bridge, serious deficiencies were noted. State Highway Department inspectors determined that the bridge no longer met structural standards and the structure was unsafe for vehicular traffic.⁵⁶ The bridge was closed and all traffic was rerouted to the 1965 bridge.⁵⁷ Efforts made to either save the bridge or have it moved to another location were unsuccessful. Plans were then made for its removal and construction of a new bridge on the site.

Because a big party opened the bridge, it was considered appropriate that a similar event be staged to say farewell. On November 7, 1987 the "World's Greatest Bridge Party" was held with the benefits going to the Fort Bend County Museum.

On July 14, 1988 explosive charges placed on the bridge were set off, ending 63 years of its standing as an entrance portal to Richmond.⁵⁸

FOOTNOTES

- 1 Geo. G. Wickline, "Texas Bridges Under Construction", Texas Highway Bulletin, vol.4, no. 11, November 1924, p. 10.
- 2 Walter Prescott Webb, ed., The Handbook of Texas (Austin: The Texas State Historical Association, 1952), p. 211.
- 3 Nan Thompson Ledbetter, "The Muddy Brazos in Early Texas", The Southwestern Historical Quarterly, vol. LXIII, no. 2, October 1959, p.251.
- 4 T.R. Fehrenbach, Lone Star (New York: Collier Books, 1968), p. 138.
- 5 Clarence R. Wharton, History of Fort Bend County (San Antonio: The Naylor Company, 1939), p. 15.
- 6 Ibid., p. 86.
- 7 Ibid., p. 89.
- 8 Ibid., p. 148.
- 9 P. Briscoe, "The First Texas Railroad", The Quarterly of the Texas State Historical Association, vol. VII, no. 4, April 1904, pp. 283-284.
- 10 A.J. Sowell, History of Fort Bend County (Houston: W.H. Coyle & Co., 1904) p. 345.
- 11 Ibid., p. 344.
- 12 Roberta Christensen, Historic Romantic Richmond (Burnet: Nortex Press, 1982) pp. 120-122.
- 13 Fort Bend County Commissioners Court Minutes, Volume L, p.351.
- 14 Austin Brothers Contracts and Schematic Drawings, George Memorial Library Archives, Richmond, Texas.
- 15 Photographic Archives of Fort Bend County Museum, Richmond, Texas.
- 16 Fort Bend County Commissioners Court Minutes, Volume N, pp. 540-551.
- 17 Fort Bend County Commissioners Court Minutes, Volume O, pp. 260-261.
- 18 Wickline, p. 39,
- 19 Fort Bend County Commissioners Court Minutes, Volume O, p.150.
- 20 Ibid., p. 112 and p. 304.
- 21 The Texas Coaster, November 16, 1923.
- 22 Ibid.
- 23 Fort Bend County Commissioners Court Minutes, Volume O, p. 222.
- 24 Ibid., pp. 237-238.
- 25 The Texas Coaster, February 22, 1924.
- 26 The Texas Coaster, April 4, 1924.
- 27 The Texas Coaster, May 2, 1924.
- 28 Ibid.
- 29 Fort Bend County Commissioners Court Minutes, Volume O, pp. 320-324.
- 30 The Texas Coaster, July 24, 1925.
- 31 The Texas Coaster, May 28, 1926.
- 32 Richmond Herald-Coaster, October 21, 1966.
- 33 Ibid. and author's visit to cemetery.
- 34 Charles Hartford Kendall's application to the Texas State Board of Registration for Professional Engineers, No. 1887, December 28, 1937.
- 35 Shannon Miller, Austin Bridge Company and Associated Companies: The First 50 Years (Dallas: Taylor Publishing Company, 1974), pp.1-2.
- 36 "Missouri Valley Bridge & Iron Company", unpublished monograph in the archives of the Kansas State Historical Society, n.d., n.p.
- 37 Missouri Valley Bridge & Iron Company, contract cards in the archives of the Kansas State Historical Society,
- 38 Robert Kinney, "Industry and Commerce in Roanoke", W.P.A. Writers Project, 1939, p.6.
- 39 I.J. Isaacs, ed., Roanoke: The Magic City of Virginia (Roanoke: The Stone PTG. & MFG. Co., 1904), p. 37.

- 40 Specification sheet of Austin Bridge Company dated March 6, 1924 with Virginia Bridge Company's name on it. State Department of Highways and Public Transportation folder on Virginia Bridge & Iron Company.
- 41 Blueprints for bridge in the Bridge Collection of the Fort Bend County Museum, Richmond, Texas.
- 42 Missouri Valley Bridge & Iron Company final report in the Bridge Collection of the Fort Bend County Museum, Richmond, Texas.
- 43 Blueprints, Fort Bend County Museum.
- 44 The Texas Coaster, May 15-22, 1925.
- 45 The Texas Coaster, May 22, 1925.
- 46 The Texas Coaster, June 19, 1925.
- 47 The Texas Coaster, July 24, 1925.
- 48 Ibid.
- 49 Martha Payton, daughter of Bert Ansel, telephone interview with author on February 16, 1989.
- 50 Ibid.
- 51 The Texas Coaster, October 6, 1933.
- 52 Payton
- 53 Fort Bend County Commissioners Court Minutes, Volume R, p. 310.
- 54 The Texas Coaster, February 16, 1934.
- 55 R.E. Stotzer, State Department of Highways and Public Transportation, Letter to James Steely, July 10, 1987.
- 56 Ibid.
- 57 Ed Suchicki, State Department of Highways and Public Transportation Memorandum to Milton M. Dietert, November 19, 1986.
- 58 Fort Bend County Advocate, July 21-28, 1988.

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Fort Bend County, Texas Commissioners Court Minutes, Volume "L".

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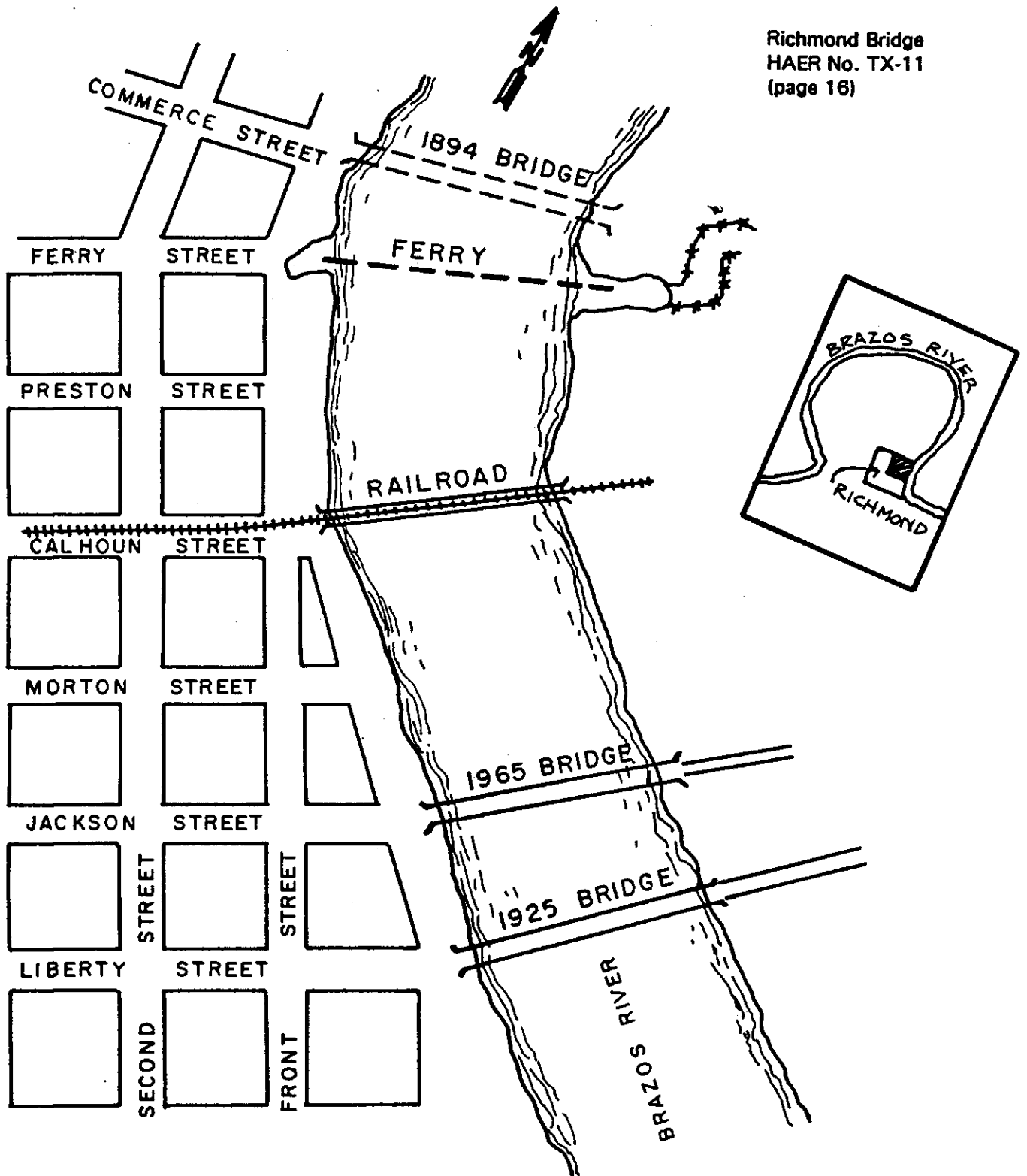
Stotzer, R.E., State Department of Highways and Public Transportation, Letter to James Steely July 10, 1987.

Suchicki, Ed. State Department of Highways and Public Transportation, Memorandum to Milton M. Dietert, November 10, 1986.

Personal Communication:

Payton, Martha, daughter of Bert Ansel, telephone interview with author on February 16, 1989.

APPENDIX 1: MAP



**BRAZOS RIVER CROSSINGS AT
RICHMOND, TEXAS**

NOT TO SCALE